





Increases in Intimate Partner Violence During COVID-19: Prevalence and Correlates

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Abstract

Measures to contain the global COVID-19 pandemic led to stay-at-home orders across the world, accompanied by fears of a global surge in intimate partner violence (IPV). We administered an online general-population survey to 1169 women and transgender/nonbinary individuals throughout the state of Michigan in June–August 2020 to assess changes in the prevalence, severity, and correlates of IPV during the COVID-19 pandemic. Quota sampling was used to match the racial/ethnic and urban/rural distribution of the state. More than one in seven (15.1%) participants reported physical, sexual, psychological, or technology-facilitated IPV since COVID, similar to the prevalence in the 3 months before COVID (16.2%). However, there were indications that IPV severity increased and that novel cases of IPV are occurring in relationships that previously had no abuse. A majority (64.2%) of individuals who experienced IPV since COVID reported that the IPV was new to the relationship (34.1%) or of increased severity during COVID-19 (26.6%), representing 9.7% of the overall sample. New or increased IPV was significantly

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more prevalent among those who were essential workers, pregnant, unable to afford rent, unemployed/underemployed or had recent changes to their job, had partners with recent changes to employment, and those who had gotten tested or tested positive for COVID-19. Urban residence, trans/nonbinary identity, and having a toddler were more strongly associated with IPV during COVID as compared to before COVID. While findings do not support significant changes in the overall prevalence of IPV, the majority of survivors reported incident IPV in relationships that had not previously been abusive, or IPV that became more severe since the start of the pandemic. Cases of new or increased IPV were more concentrated in marginalized groups. Potential touchpoints for outreach and services during future lockdowns include prenatal and pediatric settings, daycares, employers of essential workers, and COVID-19 testing centers. Policies providing rental, childcare, and unemployment support may mitigate increases in IPV during COVID-19.

Keywords

Intimate partner violence, domestic violence, COVID-19

Introduction

Measures to contain the global COVID-19 pandemic have led to stay-at-home orders across the world, accompanied by fears of a global surge in intimate partner violence (IPV) ([UN News, 2020](#)). The measures used to contain the COVID-19 pandemic could be associated with an increase in the prevalence or severity of IPV for a number of reasons. One driver of increased IPV could be economic insecurity: The U.S. unemployment rate soared from 3.8% in February 2020 to 14.4% in April and disproportionately affected women ([Tertilt et al., 2020](#)). In prior research, women's unemployment has been associated with greater likelihood of domestic abuse ([Bowlus & Seitz, 2006](#)). Relatedly, an estimated 10.4 million U.S. adults are behind on housing rental payments due to the economic crisis ([Center for Budget and Policy Priorities, 2020](#)). Like unemployment, housing insecurity has been linked to increased risk for IPV victimization among women, even after accounting for poverty and demographic factors ([Pavao et al., 2007](#)). Unemployment and household financial hardships such as housing insecurity can increase household stress and interpersonal conflict, thus leading to increases in IPV.

In addition to financial hardships, mandatory stay-at-home policies may also increase the ability of abusers to use isolation as a form of coercive control, by providing justification for isolating their partner from social support networks and by stopping them from going to work. In households where both partners are newly remaining at home all day, there is more time

spent together in which abuse can occur, which could also increase the prevalence of IPV. For those not cohabitating with their partner, concerns have been raised about a spike in technology-facilitated abuse as a way to monitor and control survivors from afar (Brudvig et al., 2020). Additionally, stay-at-home policies may have increased the prevalence or severity of IPV by presenting additional challenges in escaping abusive partners. Living in such close quarters with perpetrators who may be monitoring their activities may limit victims' ability to seek help.

The first studies published on IPV during the COVID-19 pandemic in the U.S. were based on official crime or hotline data, which suffer from reporting biases, due to the fact that (1) the minority of IPV incidents generate a crime report or service use, and (2) lower calls for service may reflect either lower prevalence of abuse or the inability of survivors to access services while on lockdown (Peterman et al., 2020b). Some sources have documented increases in police calls about domestic violence (Hsu & Henke, 2021; Leslie & Wilson, 2020; Mohler et al., 2020), whereas others have documented the opposite (Ashby, 2020a, 2020b; Bullinger et al., 2020; Center for Criminal Justice Research, 2020), though the overall consensus from these data appears to be an increase in reports (Piquero et al., 2021). Similarly, hotline use appears to have increased in some locations but decreased in others (Agüero, 2020; Perez-Vincent et al., 2020). A small number of studies of IPV victimization during the pandemic using self-report data from web surveys administered during lockdowns in Argentina (Perez-Vincent et al., 2020), Australia (Boxall et al., 2020), Canada (Béland et al., 2020), Spain (Arenas-Arroyo et al., 2020), and the United States (Davis et al., 2020; Jetelina et al., 2020) are starting to emerge, but findings are also mixed, and none has directly examined the prevalence, severity, and correlates of IPV in the period before and during lockdown using validated behavioral measures.

The World Health Organization (WHO) and United Nations (UN) Women Joint Programme on Violence Against Women Data (2020) identified the importance of data collection, with appropriate ethical design to protect participant safety, during the COVID-19 crisis to understand how pandemics may result in increases in violence against women and what risk factors are associated with such increases. Such data can provide vital information to develop evidence-based policy that seeks to prevent violence and mitigate short- and long-term consequences for survivors. To address these pressing research needs, we conducted an online, cross-sectional survey to comprehensively assess physical, sexual, psychological, and technology-facilitated IPV before and during COVID-19 in the state of Michigan. Detroit, Michigan was one of the national epicenters of COVID-19 (Bryant, 2020). On March 23, 2020, Governor Whitmer issued a statewide stay-at-home order limiting all non-essential travel and discontinuing all non-essential business services and operations (Michigan, 2020). By April 23, Michigan was third in the U.S.

for COVID-19 deaths (Modell & Kardia, 2020). Stay-at-home orders were partially lifted on June 1. We deployed our survey after the end of stay-at-home orders in June 2020, when more survivors could safely participate in the study.

Methods

Recruitment

Participants were recruited via Qualtrics Panels. Qualtrics collaborates with over 20 sample providers, mostly actively managed, double-opt-in market research panels. Survey respondents are randomly selected by sample providers where demographic information provided in advance indicates they are likely to qualify for participation.

Survey invitations were distributed to respondents using in-app and SMS notifications, email invitations, and a panel portal. Participants are not informed of the survey's specific focus in the invitation to avoid self-selection bias. Incentives were determined by Qualtrics (average \$6). The type of rewards included cash, airline miles, gift cards, charitable donations, sweepstakes entrance, and vouchers.

Eligibility

Respondents were eligible to participate if they completed a CAPTCHA; were 18 years of age or older; women, transgender, and/or nonbinary; lived in the state of Michigan; had been in a sexual or romantic relationship in the past year; and consented to take the survey and provide honest information. Quota sampling was used to ensure a sample that was as diverse as the state of Michigan, including at least 15% rural (based on ZIP code of residence), 15% Black, 6% Latino, 5% Asian, and 7% multiracial or other race/ethnicity respondents. We also ensured at least 34% were 35–54 and 21% were 55+; in reality, US Census data indicate that roughly 35% of Michigan residents are 55 or older. While no quotas were placed on low-income versus high-income participants, the sample enrolled reflected the income distribution of the state as well, with 26% of the sample having a household income below \$30,000, including 15% who had a household income below \$20,000. We did not place quotas on gender, given that the eligibility criteria for study inclusion was restricted to adults who identified as cisgender women or transgender/nonbinary. Ultimately, the percentage of women ($n = 1145$, 98%) and transgender/nonbinary individuals ($n = 24$, 2%) in the sample was roughly consistent with estimates of the proportion of transgender/nonbinary individuals in US society (Meerwijk & Sevelius, 2017).

Data Collection

Responses were collected between June 26, 2020, and August 11, 2020, though 90% of responses were collected by July 25. Qualtrics checks every respondent IP address and uses digital fingerprinting technology to exclude duplicates. The final sample contained 1169 responses from participants who completed the survey. Missing data to individual questions (<1%) were handled using model-wise deletion.

Ethical Considerations

This research was considered exempt by the University of Michigan Health Sciences and Behavioral Sciences Institutional Review Board because data were collected anonymously. We followed international research guidelines set forth by the United Nations (UN) Women and World Health Organization to guide our survey design, sampling strategy, and to navigate potential ethical issues (UN Women and World Health Organization, 2020; World Health Organization, 2001). Despite the challenges and safety concerns about conducting research during a pandemic, UN Women and World Health Organization (2020) highlight the importance of collecting data on violence against women during COVID-19 in order to identify risk factors for IPV during the crisis. These guidelines emphasize the importance of conducting actionable research, such that short- and long-term consequences of IPV can be identified and mitigated through tailored interventions and public health policy approaches. We aligned our research questions with those outlined as highest priority in these ethical guidelines. We also followed guidelines such as avoiding in-person or telephone surveys in favor of an online survey, and creating a mobile-friendly survey so that survivors could take the survey on their phone in a location that felt safe to them, rather than being confined to taking it on a desktop computer. Other guidelines followed included conducting an initial pilot with a small sample and looking for evidence of distress in write-in responses or drop-off in responses in the parts of the survey assessing violence, of which we saw none. We also followed recommendations to examine pilot data before proceeding to ensure that reported prevalence of violence was not dramatically smaller than nationally representative estimates reported in non-COVID times; dramatically reduced prevalence could signal that the sampling strategy was not reaching survivors and could give the false impression that IPV was not a concern during COVID, which would have implications for resource allocation to survivors (Dartnall & Bates-Jefferys, 2020; Peterman et al., 2020a; UN Women, and World Health Organization, 2020).

To further minimize safety concerns, we consulted with the Michigan Domestic and Sexual Violence Prevention and Treatment Board to inform our

methodology, navigate ethical issues, and implement safeguards to prioritize the safety of study participants. We delayed survey deployment until after stay-at-home orders were lifted, so that IPV victims would not be invited to the survey while under stay-at-home orders with an abuser. We included an emergency quick “exit” button in our survey, which appeared on the top of every survey page. A list of active local and national domestic violence resources was provided at the beginning and end of the survey, and again to participants who endorsed survey items indicating that IPV was life-threatening.

We included only cisgender women ($n = 1165$) and transgender/nonbinary ($n = 24$) individuals in our study sample. This decision was guided by the Michigan Domestic and Sexual Violence Prevention and Treatment Board’s suggestions and the World Health Organization guidelines (2020), which emphasize the risks that women uniquely face during a global pandemic emergency, including certain forms of IPV; these risks also extend to those associated with femininity through their sex assigned at birth or transgender identity (Peitzmeier et al., 2020). Seminal WHO guidelines on ethics for researching IPV in diverse settings suggest prioritizing data collection with women and only enrolling one person from each household (World Health Organization, 2001). Nationally representative US studies that study IPV among both men and women also restrict participation to one member per household when participants are randomly selected by landline (National Center for Injury Prevention and Control, 2015). In line with these best practices, we made the decision to exclude cisgender men to reduce the possibility of enrolling two members of the same couple into the survey, as this can carry significant risks when one member of the couple is abusive and finds out their partner may have disclosed abuse in the survey. Because we had no way to verify in an anonymous online survey that we were only enrolling one member of the couple (compared to a household-based or telephone-based survey), the best approach we identified was to reduce the number of times this might happen by prioritizing data collection with women and trans individuals, who experience elevated rates of certain types of IPV, while excluding cisgender men. We acknowledge that this is an imperfect approach as abuse can and does happen in relationships between cisgender women and trans/nonbinary individuals, and that cisgender men also experience IPV.

IPV Ascertainment

Participants were asked to report lifetime exposure to physical, sexual, psychological, or technology-based IPV using a total of 20 behavioral items. If participants reported any lifetime exposure, they were then asked to identify whether the behaviors occurred (1) in the 3 months since COVID began, as marked by when stay-at-home orders were first implemented (March 2020–

June 2020); (2) in the 3 months prior to stay-at-home orders (December 2019–February 2020); and (3) sometime prior to December 2019.

Physical (five items), sexual (three items), and psychological (seven items) IPV were measured with items drawn from the National Intimate Partner Violence and Sexual Violence survey (NISVS) and the Danger Assessment (Black et al., 2011; Campbell et al., 2003). The technology-facilitated IPV measure included four items drawn from the Cyber Aggression in Relationships Scale (Watkins et al., 2018), and one developed based on Freed et al. (Freed et al., 2018). Full wording of each item can be found in Appendix Table A1.

Outcome Measures

The primary outcome was reporting new, more severe, or more frequent IPV during the COVID period. We focused on this outcome to assess changes in IPV potentially associated with the COVID pandemic and stay-at-home policies, rather than abuse that began before COVID and improved or remained constant during the COVID period. Individuals were defined as experiencing the outcome if they reported physical, sexual, psychological, or technology-facilitated IPV in the months since COVID according to our 20-item behavioral measure, and they reported that this violence was (1) new or unique to the COVID period, (2) was of increased severity during COVID, (3) was with a new partner they met during COVID, or (4) they perceived the violence was of the same severity before and during COVID, but they had no reported instances of IPV in the 3 months before COVID and did report violent incidents since COVID. Modeling the primary outcome in this way was decided a priori before beginning analyses.

Data Analysis

Descriptive statistics were used to describe the prevalence of different types of IPV pre-COVID and during the first initial months of COVID. Crosstabs and chi-squared tests were used to examine bivariate associations between potential risk factors for new or increased IPV since COVID. Covariates were selected based on a conceptual framework that draws on both theoretical perspectives and empirical data sources. Specifically, we use the World Health Organization's (WHO) conceptual framework of risk factors commonly associated with IPV (Abramsky et al., 2011) as well as socioecological perspectives of IPV that emphasize the multilevel nature of risk and protection (Hardesty & Ogolsky, 2020). These frameworks identify a range of individual demographic factors, partnership, and familial characteristics that have the potential to increase or decrease risk for IPV. We also included additional factors that were noted by our service provider partners and also identified in

media reports (e.g., time spent at home with partner during lockdown), that were pertinent to studying IPV during the pandemic.

Following a guideline that the number of variables in a multivariable logistic regression should not exceed 20% of the number of events in the dataset (Vittinghoff & McCulloch, 2007), we then selected a parsimonious multivariable model and collapsed variable categories based on our conceptual understanding and the bivariate results. We did not include partner characteristics in the model because not all individuals had a current partner, and inclusion of these variables would have dropped these individuals from the analysis. The same set of covariates was also used to construct a regression model predicting IPV in the 3 months before COVID to explore how risk factors may have changed since COVID began.

Results

The prevalence of experiencing physical, sexual, psychological, or technology-facilitated IPV in the first initial months of COVID ranged from 4.2% (severe physical IPV) to 11.4% (psychological IPV) (Table 1). Prevalence of individual IPV indicators is included as an appendix (Appendix Table A1). Prevalence of experiencing any of these forms of IPV in the immediate pre-COVID and during COVID periods did not differ significantly (16.2% vs 15.1%), while 3.3% (33/1145) of the sample reported no incidents of IPV pre-COVID but experienced IPV since COVID, an additional 4.3% (49/1145) reported the reverse—that they were experiencing IPV pre-COVID but had not experienced IPV since COVID—hence the lack of significant net change in the overall prevalence of any IPV since COVID (Appendix Table

Table 1. Prevalence of Different Types of IPV in Different Time Periods, as Assessed With a Behavioral IPV Screener.

	Before December 2019 % (n/N)	In the 3 Months Before COVID % (n/N)	Since COVID % (n/N)
Psychological IPV	26.1% (303/1163)	13.0% (151/1164)	11.4% (132/1162)
Technology-facilitated IPV	17.3% (201/1165)	8.8% (103/1164)	7.6% (89/1165)
Physical IPV	24.1% (281/1164)	6.8% (79/1163)	5.9% (68/1162)
(Severe physical IPV)	16.2% (189/1164)	5.3% (62/1164)	4.2% (49/1163)
Sexual IPV	21.8% (253/1161)	6.3% (73/1160)	5.5% (64/1160)
Any IPV	40.6% (469/1156)	16.2% (186/1148)	15.1% (173/1146)

There were no significant differences between the prevalence reported in the 3 months before COVID and since COVID.

A2). Incident IPV was reported by 3.8% of those with no lifetime history of IPV in the immediate pre-COVID period, and by 4.0% of those with no recent history of IPV in the first initial months of COVID (Appendix [Tables A3](#) and [A4](#)), demonstrating stable incidence across these two time periods.

Out of those who reported IPV since COVID, the majority reported they had not been harmed (56.1%, 97/173) or that the harm had gotten better (8.1%, 14/173) since June when the strictest stay-at-home orders were lifted ([Table 2](#)). However, for the subset of survivors who had experienced severe physical IPV since the pandemic, the majority indicated the violence had either gotten worse since June (40.8%, 20/49) or was about the same (30.6%, 15/49).

Table 2. Perceptions of Changes in Severity of IPV Since COVID and Abuser Characteristics.

	% (n/N)
You indicated that you experienced harm from a partner or ex-partner since the start of COVID-19 (since March 2020). How does this compare to your experiences with this person prior to the COVID-19 pandemic? [Asked of those who reported IPV since COVID, $n = 173$]	
This is new and unique to the COVID period	4.1% (48/1169)
This is not new, but it is more frequent/severe	3.9% (46/1169)
This is not new, but it is less frequent/severe	2.6% (30/1169)
This is not new, and it is about the same	3.3% (38/1169)
N/A, I did not know this person before COVID	.9% (11/1169)
Primary outcome: New or increased IPV since COVID	9.7% (113/1169)
(i.e., new, worse, or new partner; or about the same but reported abuse incidents since COVID and no abuse incidents before COVID)	
Did this person continue to harm you in the past month since COVID stay-at-home restrictions have relaxed slightly? [Asked of those with any IPV since COVID]	
Yes, and gotten worse since June	15.0% (26/173)
Yes, and about the same	20.8% (36/173)
Yes, but gotten better	8.1% (14/173)
No, no harm in the last month	56.1% (97/173)
Did this person continue to harm you in the past month since COVID stay-at-home restrictions have relaxed slightly? [Among those with severe physical violence since COVID]	
Yes, and gotten worse since June	40.8% (20/49)
Yes, and about the same	30.6% (15/49)
Yes, but gotten better	10.2% (5/49)
No, no harm in the last month	18.4% (9/49)
Relationship with person who harmed you since COVID	
Current partner	73.4% (127/173)
Former partner	26.6% (46/173)

Despite stable overall prevalence and incidence of experiencing any IPV, there were indicators of increased IPV severity during COVID. One in 10 respondents (9.7%; 113/1169) reported some type of IPV and reported that the harm they experienced from a partner was new or of increased severity or frequency since COVID (Table 2). New or increased IPV was more common among respondents who were sexual or gender minorities, less educated, younger, disabled, urban or suburban, or pregnant (Table 3). New or increased IPV was also more common among those who had a lifetime history of IPV before December 2019, and varied by race/ethnicity, with the highest prevalence among Native Americans. With regard to economic factors, new or increased IPV was more common among essential workers and those who were unemployed and looking for work or underemployed, those who had changes to their work situation since COVID, and those who had trouble paying rent or accessing medicine, internet, or phone since COVID. With regard to family and housing characteristics, new or increased IPV was most common among those with toddlers as compared to those with no children or children of other ages, those who lived part-time with a current partner versus full time or not living together at all, those who could not pay rent on time since COVID, and those with six or more people living in the home. For the full details on prevalence of new or increased IPV by subgroup, see Table 3.

With regard to partner characteristics, new or increased IPV was more common among those with current partners who were cis women or trans, unemployed and looking for work or underemployed, who had changes to employment during COVID, and who were isolating “all the time” during April and May.

New or increased IPV was also more common among those who were themselves self-isolating “all the time” during the stay-at-home orders. Those who visited liquor stores or used public transportation during stay-at-home orders were more likely to report new or increased IPV compared to those who did not. New or increased IPV was also more common among those who had been tested for COVID and nearly universal among those who tested positive for COVID (85.7%).

In adjusted analyses, new or increased IPV was independently associated with living in suburban (aOR = 2.98, 95% CI 1.09, 8.14) or urban (aOR = 2.73, 95% CI = 1.25, 5.96) as compared to rural areas, not being able to pay rent on time during COVID (aOR = 4.80, 95% CI = 2.92, 7.87), having a parenting time or child support order (aOR = 2.36, 95% CI = 1.21, 4.59), and having a 1–2 year old child (aOR = 2.35, 95% CI = 1.01, 5.48) as compared to having no children (Table 4). New or increased IPV was also marginally associated with being trans/nonbinary (aOR = 3.34, 95% CI = .98, 11.32, $p = .054$). New or increased IPV was significantly less likely among those unemployed and not looking for work (aOR = .34, 95% CI = .17, .72) as compared to those employed full time.

Many of these risk or protective factors were also associated with experiencing IPV in the 3 months before COVID, though the magnitude and

Table 3. Correlates of Experiencing New or Increased IPV Since COVID.

	New or Increased IPV Since COVID % (n/N)
Personal demographic characteristics	
Gender	
Cisgender woman	9.0% (103/1145)***
Trans/nonbinary	41.7% (10/24)***
Age	
18–24	16.5% (37/224)***
25–34	12.6% (34/270)***
35–44	10.2% (24/235)***
45–54	4.5% (8/176)***
55–64	3.7% (6/162)***
65+	3.9% (4/102)***
Race	
Asian American/Pacific Islander	12.1% (8/66)*
Black/African American	8.6% (16/185)*
Latino	11.9% (7/59)*
American Indian/Alaska Native	29.4% (5/17)*
Multiracial	16.1% (9/56)*
Other	16.7% (2/12)*
White	8.5% (66/772)*
Sexual orientation	
LGBQ, ace, questioning	18.0% (29/161)***
Straight/heterosexual	8.3% (84/1006)***
Urbanicity	
Rural	4.1% (9/219)**
Suburban	9.8% (11/112)**
Urban	11.1% (93/838)**
Disability	
Yes	12.7% (36/284)*
No	8.5% (74/870)*
Prefer not to say	20.0% (3/15)*
Education	
Did not complete high school	24.4% (10/41)***
High school or GED	11.7% (28/239)***
Some college or tech school	11.0% (41/373)***
College degree or higher	6.6% (34/516)***
Nativity	
US-born	9.7% (104/1069)
Immigrant	9.1% (9/99)
Pregnancy status	

(continued)

Table 3. (continued)

	New or Increased IPV Since COVID % (n/N)
Yes or maybe	34.2 (27/79)***
No	7.9% (86/1086)***
Remote IPV history (before December 2019)	
Yes	18.1% (85/469)***
No	3.8% (26/687)***
Employment and economic status	
Employment status	
Employed (full-time)	11.5% (53/461)***
Employed (part time or temp)	13.6% (27/199)***
Unemployed, looking for work	15.9% (22/138)***
Unemployed, not looking for work	3.1% (11/354)***
Changes to employment since COVID	
Laid off	11.6% (20/172)***
Lost hours/salary but not employment	17.8% (43/241)***
Increased hours/salary or new job	15.6% (19/122)***
No changes	5.5% (19/345)***
Unemployed before and since COVID	4.2% (12/289)***
Income	
<20,000	12.8% (21/164)***
20–30	15.3% (20/131)***
30–40	11.8% (16/136)***
40–60	4.4% (9/204)***
60–80	11.4% (24/211)***
80–100	8.1% (9/111)***
100,000+	6.7% (11/165)***
Decreases in access to food since COVID	
Yes	10.3% (31/301)
No	9.5% (82/865)
Decrease in access to phone since COVID	
Yes	31.4% (11/35)***
No	8.9% (101/1130)***
Decrease in access to internet since COVID	
Yes	15.3% (18/118)*
No	9.0% (94/1047)*
Decrease in access to prescription medicine or medical help since COVID	
Yes	21.7% (60/277)***
No	6.8% (60/888)***

(continued)

Table 3. (continued)

	New or Increased IPV Since COVID % (n/N)
Ever couldn't pay rent on time since COVID	
Yes	30.1% (62/206)***
No	5.3% (51/963)***
Essential worker status	
Yes	13.8% (61/443)***
No	7.2% (52/725)***
Partner characteristics	
Relationship status	
Married	5.5% (33/597)***
Never married; single	15.9% (11/69)***
Divorced, separated, or widowed; not currently partnered	16.7% (4/24)***
Never married, partnered	14.1% (48/341)***
Divorced/separated/widowed, partnered	12.3% (17/138)***
Current partner gender	
Cis male	7.2% (70/978)***
Cis female	23.1% (18/78)***
Transgender/nonbinary	50.0% (10/20)***
Current partner employment status	
Full time	8.6% (53/618)***
Part time or temp	17.6% (21/119)***
Unemployed and seeking work	15.6% (17/109)***
Unemployed and not seeking work	3.3% (7/211)***
Current partner changes to employment since covid	
Laid off	12.3% (19/155)***
Lost hours/salary but not employment	16.3% (36/221)***
Increased hours/salary or new job	13.4% (21/157)***
No changes	3.5% (13/371)***
Unemployed before and since COVID	4.7% (8/171)***
Current partner essential worker status	
Yes	9.6% (45/467)
No	8.7% (53/608)
Current partner self isolating during April and May	
All the time	14.2% (38/268)*
Most of the time	7.5% (38/507)*
Some of the time	7.8% (17/217)*
None of the time	7.7% (5/65)*
Not sure	0% (0/19)*
COVID changed how much time I spent with my current partner in person	

(continued)

Table 3. (continued)

	New or Increased IPV Since COVID % (n/N)
More time	10.5% (69/658)
About the same	7.0% (16/230)
Less time	6.9% (13/188)
Parenting time or child support order with partner or ex-partner	
Yes	29.4% (35/119)***
No	7.4% (77/1040)***
Family and housing characteristics	
Age of youngest child	
No children	9.8% (45/460)***
<1 year old	6.0% (3/50)***
1–2 years	24.1% (21/87)***
3–5 years	11.4% (9/79)***
6–10 years	13.3% (12/90)***
11–13 years	6.4% (3/47)***
14–17	7.0% (5/71)***
18+	5.3% (15/284)***
Cohabitation status with current partner	
Live together, full time	8.7% (68/786)***
Live together, part time	24.2% (15/62)***
Do not live together	6.6% (15/228)***
Number of household occupants (part or all of the time)	
Live alone	8.7% (10/115)***
2	6.0% (24/397)***
3	8.7% (18/206)***
4	10.9% (24/220)***
5	11.2% (11/98)***
6+	19.8% (26/131)***
COVID-related characteristics and public accommodations use during stay-at-home orders	
Self-isolating status during April/May	
All the time	13.6% (50/367)*
Most of the time	7.6% (49/641)*
Some of the time	9.4% (11/117)*
None of the time	6.8% (3/44)*
Visited during April/May	
Grocery store went vs did not go	9.5% (99/1037) vs 10.6% (14/132)
Pharmacy	8.2% (43/522) vs 10.8% (70/647)
School/childcare	9.1% (4/44) vs 9.7% (109/1125)
Hospital or medical visits	9.5% (24/253) vs 9.7% (89/916)

(continued)

Table 3. (continued)

	New or Increased IPV Since COVID % (n/N)
Public transportation	20.0% (7/35)* vs 9.3% (106/1134)*
Restaurants	13.8% (19/138) vs 9.1% (94/1031)
Liquor store	20.3% (29/143)*** 8.2% (84/1026)***
Had a COVID test	
Yes	20.7% (42/203)***
No	7.4% (68/915)***
Have you tested positive for COVID	
Yes	85.7% (24/28)***
No	7.9% (86/1088)***

* $< .05$, ** $< .01$, *** $< .001$.

Table 4. Multivariable Logistic Regression Predicting New or Increased IPV Since COVID and in the 3 Months Before COVID (Simplified Variables).

	New or Increased IPV Since COVID aOR (95% CI) N = 1135 (112 Cases)	IPV Before COVID aOR (95% CI) N = 1113 (183 Cases)
Personal demographic characteristics		
Gender		
Cisgender woman	Ref	Ref
Trans/nonbinary	3.34 (.98, 11.32)	.86 (.27, 2.71)
Age		
18–24	1.95 (.79, 4.81)	1.80 (.89, 3.65)
25–44	.98 (.45, 2.15)	1.20 (.65, 2.19)
45+	Ref	Ref
Race		
POC	1.10 (.68, 1.76)	1.23 (.84, 1.79)
White	Ref	Ref
Sexual orientation		
LGBQ, ace, questioning	1.11 (.63, 1.96)	1.27 (.80, 2.01)
Straight/heterosexual	Ref	Ref
Urbanicity		
Rural	Ref	Ref
Suburban	2.98 (1.09, 8.14)*	1.23 (.59, 2.57)
Urban	2.73 (1.25, 5.96)*	1.07 (.65, 1.77)
Education		
Did not complete high school	1.61 (.54, 4.82)	1.05 (.43, 2.57)

(continued)

Table 4. (continued)

	New or Increased IPV Since COVID aOR (95% CI) < N = 1135 (112 Cases)	IPV Before COVID aOR (95% CI) N = 1113 (183 Cases)
High school or GED, or some college	1.32 (.79, 2.20)	.96 (.64, 1.43)
College degree or higher	Ref	Ref
Pregnancy status		
Yes or maybe	1.63 (.82, 3.24)	1.82 (1.00, 3.31)*
No	Ref	Ref
Employment and economic status		
Employment status		
Employed (full-time)	Ref	Ref
Employed (part time or temp)	.89 (0.49, 1.64)	1.05 (.64, 1.74)
Unemployed, looking for work	.90 (0.47, 1.72)	1.52 (.90, 2.58)
Unemployed, not looking for work	.34 (.17, .72)**	.64 (.38, 1.08)
Ever couldn't pay rent on time since COVID		
Yes	4.80 (2.92, 7.87)***	3.42 (2.26, 5.18)***
No	Ref	Ref
Partner characteristics		
Relationship status		
Married	Ref	Ref
Never married	1.42 (.77, 2.62)	1.43 (.89, 2.32)
Divorced, separated, or widowed	1.34 (.67, 2.69)	1.41 (.80, 2.47)
Parenting time or child support order with partner or ex-partner		
Yes	2.36 (1.21, 4.59)*	3.69 (2.13, 6.40)***
No	Ref	Ref
Family and housing characteristics		
Age of youngest child		
No children	Ref	Ref
<1 year old	.52 (.12, 2.24)	1.20 (.49, 2.95)
1–2 years	2.35 (1.01, 5.48)*	1.16 (.57, 2.36)
3–10 years	1.10 (.49, 2.49)	.62 (.32, 1.20)
11+ years	.97 (.43, 2.28)	.73 (.38, 1.37)

aOR = adjusted odds ratio. $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. Bolded values indicate significance at $p < .05$.

significance level varied, including not being able to pay rent on time, employment status, and having a parenting time or child support order. However, IPV victimization in the 3 months before COVID was not significantly associated with trans/nonbinary gender identity, urbanicity, or having a toddler.

Discussion

Prevalence of IPV During COVID

To our knowledge, these represent the first self-report data in a large US general population sample of cisgender women ($n = 1145$) and trans people ($n = 24$) to directly compare IPV prevalence and correlates in the 3 months before and 3 months after the COVID-19 pandemic began. Our study clarifies, using a 20-item measure drawn from validated IPV screeners and a sample that mirrors the demographic distribution of Michigan, that while the population incidence and prevalence of IPV may not be increasing, there is evidence of increased severity for a significant proportion of those experiencing IPV during COVID-19. Importantly, the majority (64.2%) of people experiencing IPV during COVID-19 are experiencing it in partnerships where abuse was never previously an issue (34.1%), or are experiencing increases in the severity or frequency of abuse (26.6%). One in 10 women and trans people in Michigan (9.7%) experienced new or increased IPV during COVID, and this 9.7% was strongly concentrated among socially and economically vulnerable groups. For partners who may have already been abusive or were already inclined to be abusive, pandemic-related stressors and increased access to partners during lockdown may have triggered more severe abuse. This finding is aligned with qualitative reports from survivors that existing abuse was exacerbated by the COVID pandemic (Ravi et al., 2021). The COVID pandemic may not have significantly increased the prevalence or incidence of abuse victimization by increasing the number of individuals who would perpetrate abuse when they were otherwise not likely to have become abusive. We note that while there was no evidence for a population-level increase in incidence or prevalence, increased IPV severity was disproportionately concentrated in marginalized minority communities.

We found that most survivors of IPV reported decreases in frequency or severity once the strictest stay-at-home orders were lifted in June, but for those who experienced severe physical IPV, the harm persisted and often worsened. Stay-at-home orders may generate additional stressors that trigger IPV in cases where the abuse is relatively less severe, and that abuse may subside once the stay-at-home order ends. However, it is difficult to determine from this observational, cross-sectional dataset whether harm decreased in June by chance or due to the lifting of the stay-at-home orders. For individuals with severe abuse, violence may be entrenched in the relationship and more likely to

persist beyond the end of stay-at-home orders. More research is needed to understand if or how stay-at-home orders may cause lasting escalations in severe IPV that persist beyond the end of the order.

We found that 34% of people who experienced IPV since COVID reported it had never happened before in that relationship, nearly identical to findings from Australia (Boxall et al., 2020). Previous US studies using police call data had found that an increase in DV calls was driven by households where IPV had not occurred before (Leslie & Wilson, 2020), but most IPV does not result in a police report. We clarify that IPV is occurring both in partnerships where abuse predated COVID and where the stressors of COVID may have sparked novel abuse.

Correlates of Increased IPV

New or increased IPV is disproportionately concentrated in specific subgroups, including individuals who were transgender or non-binary, sexual minorities, disabled, younger, or less educated. While sample sizes precluded deeper subgroup analysis, non-Black people of color, especially Native American individuals, appeared to have the highest prevalence of new or escalated IPV. These historically marginalized populations may be especially vulnerable and face compounded risks to new or increased IPV exposure during the COVID-19 crisis.

We found that individuals who stayed at home “all the time,” and individuals with partners who stayed at home “all the time,” were more likely to experience new or increased IPV. It is difficult to interpret the potential causal direction of this association—that is, whether those who were at home all day were more prone to increases in IPV, or whether being forced to stay at home was an aspect of the abuse itself. We found no association between “spending much more time together” and new or increased IPV. Similarly, increased IPV was more common among those who lived together part-time than among those who lived together full-time. This finding could be because IPV was more common in dating than in married relationships, which were more likely to be living together part time; it could also be due to sampling biases wherein individuals who were living full-time with an abusive partner may have been less able to participate in the survey. We also note that 1 in 4 people who experienced IPV during COVID experienced it from a former partner, rather than a current partner, indicating IPV risk is not solely related to being quarantined with a current partner. More work should be done to contextualize these findings and others (Arenas-Arroyo et al., 2020; Perez-Vincent et al., 2020) that suggest that quarantining together may increase likelihood of increased IPV.

Partner characteristics associated with IPV victimization included having a current partner who is cis female or trans, is unemployed and looking for work

or underemployed, or who had changes to their employment during COVID. Findings around partner gender identity are likely confounded by participant sexual orientation and gender identity, given unique vulnerabilities to violence faced by LGBTQ+ individuals (Peitzmeier et al., 2020). The other findings build on other studies (Davis et al., 2020; Perez-Vincent et al., 2020) that found IPV during COVID is associated with partners facing economic stress caused by loss of job and/or income.

Changes in Risk Factors during the Pandemic

While most risk factors remained qualitatively similar pre- and post-pandemic, several new or heightened risk factors emerged in the COVID period for IPV. Transgender identity, urbanicity, and having a toddler were not significantly associated with experiencing any IPV in the 3 months before COVID in our sample (perhaps for some of these groups due to small sample sizes), but were significantly associated with increased IPV since COVID began, after adjusting for other factors. While we know that generally IPV is more prevalent in transgender communities (Peitzmeier et al., 2020) and for women with young children (Fusco & Fantuzzo, 2009), heightened risk for these groups in our sample since COVID may speak to the disproportionate impact that COVID-related stay-at-home policies may have had on these populations. Trans populations report difficulties accessing gender affirmation services deemed “nonessential” during the pandemic and may have had to move in with individuals who are not supportive of their identity, which is linked to mental health burden and other IPV vulnerabilities (Jarrett et al., 2021). Individuals living in urban areas are more likely to be living in smaller, high-density housing that may generate more stress when everyone is forced to stay at home, triggering conflict and potentially IPV. We also found that unemployed participants not looking for work had lower odds of experiencing IPV than those employed full-time. Explanations for this finding likely include residual confounding by age and retirement status, but also might include reduced household stress among these individuals and thus less risk for victimization, particularly if they were receiving unemployment benefits or had additional financial resources or supports at the time. Lastly, the early childhood years are challenging time when child abuse and IPV are more prevalent (Fusco & Fantuzzo, 2009); other studies have also found a link between having children and IPV during COVID (Arenas-Arroyo et al., 2020). Daycare closures may have disproportionately put stress on parents of toddlers, in some cases forcing them to quit their jobs in order to provide childcare in a way that parents of older children may not have had to do.

Public Health Implications

Targeted Points of Outreach. Results suggest numerous targeted points of entry for outreach, intervention, and prevention. Over one-third of pregnant individuals reported new or increased IPV during the COVID-19 crisis. Pregnancy is a high-risk time in abusive relationships (Bailey, 2010). Universal screening, education, and referral for IPV should be conducted during prenatal care visits and during wellness visits with toddler and infant-aged children, given that pregnant individuals and individuals with young children presented at greatest risk. Daycares, preschools, and elementary schools should also provide resources to parents, including education around IPV and referrals to unemployment services, rental assistance, and legal aid around parenting time and child support orders. Additionally, given that our study found that individuals who were essential workers were about twice as likely to experience new or increased IPV as those who were not, workplaces should make IPV-specific resources accessible to essential employees. We found that new or increased IPV was nearly three times more common among those who had received a COVID test than those who had not, and in particular among those who tested positive for COVID, mirroring the results of another US-based study that found that those who self-reported symptoms consistent with COVID-19 experienced higher rates of psychological IPV (Davis et al., 2020). This points to a potential syndemic, or synergistic epidemic, of IPV and COVID mutually reinforcing one another (Stark et al., 2020). COVID testing sites could routinely provide IPV referrals and educational materials given the elevated IPV prevalence among those who test for COVID-19 or test positive. Given the particularly high percentage of individuals reporting increased IPV among those who tested positive for COVID (85.7%), when individuals are contacted with positive test results, universal education, and provision of IPV referral information could be directly provided at that time if it can be done privately and safely.

Individuals who frequented liquor stores and public transportation during the stay-at-home period were more likely to experience elevated IPV than those who did not. Community-based partnerships with liquor stores could be another point of outreach, where stores can make IPV resources or hotline information available to customers. This may be particularly important during lockdowns as bar closures may have increased drinking at home, which is a known risk factor for increased IPV severity (Graham et al., 2011). Ads or palm cards for local IPV organizations could be placed on buses. Interventions that encourage the use of “safe words” to obtain help for IPV at grocery stores or pharmacies may reach more people since more people in general frequent these locations, but we did not find that IPV survivors were more likely than others to frequent these locations.

Implications for Policy

Individuals who could not afford to pay their rent since COVID had nearly 5 times the odds of experiencing increased IPV, even after controlling for the effects of demographics, family, partner, and household characteristics. IPV can cause housing instability, which can in turn place women and trans individuals at greater risk for further abuse (Niolon et al., 2009). In light of the US Supreme Court striking down the federal moratorium on evictions in August 2021, federal or state policies focused on providing rental assistance may be a key point of intervention in reducing IPV within the context of the COVID-19 crisis. Some US cities have also created partnerships with hotel chains to provide additional housing for survivors. We also saw evidence in bivariate analyses that those who were unemployed or underemployed—and those whose partners were unemployed or underemployed—were disproportionately affected by IPV, as were those who saw changes to their work situation during COVID. Reinvestment in federal programs such as the Paycheck Protection Program may lead to greater employment stability and reduce the financial stress that is linked to IPV. Maintaining open daycares for young children during lockdowns should be prioritized. States should consider focusing housing, childcare, and employment support policies to reach especially vulnerable populations including those living in urban parts of the state.

Limitations

Data are cross-sectional and do not allow for assessing causal relationships among study variables. Data may be susceptible to recall bias, given that we asked to report violence pre-pandemic and post-pandemic, and some respondents may have found it difficult to recall exact timing. The survey was conducted online and in English, which limited our reach to individuals who may be most vulnerable to experiencing IPV. Data were not a random sample, though online sampling biases were mitigated with the use of quota sampling to approximate racial/ethnic, age, and rural/urban distributions of the state. Additionally, data were collected in one state and may not be generalizable to other states. In non-pandemic times, Michigan has roughly median rates of IPV, ranking 21 out of 50 states and the District of Columbia for the prevalence of lifetime physical or contact sexual violence or stalking by an intimate partner, indicating it is average compared to other states (Smith et al., 2016). Our IPV assessment tool was behavioral—while the items we used were drawn from validated measures considered a “gold standard” in research, they may miss instances of IPV where ongoing power dynamics indicate abuse even where an instance of physical, sexual, psychological, or technology-facilitated abuse has not recently occurred. The items we selected

for psychological IPV in particular included items assessing more severe types of psychological IPV and coercive control, and thus may undercount prevalence as compared to more sensitive screeners such as the Conflict Tactics Scale that include items like “shouted at partner.” However, the items we chose were more specific to coercive control that survivors may seek support or additional services for during the COVID period. While we looked at partner characteristics as potential correlates of IPV, this was information about current partners and not necessarily the person who committed IPV during COVID, which could be an ex-partner or not the respondent’s main partner. Some survivors in a current abuse situation may not have felt safe participating in the research, resulting in underestimation of the prevalence of IPV. Despite these limitations, we believe these data have key strengths compared to police report or single-clinic data published to date on changes in IPV in the US context, given best-practice ethical guidelines that precluded telephone and in-person surveys.

Conclusion

While we did not detect an overall increase in IPV prevalence during the pandemic, the prevalence of new IPV or increased severity in IPV, and disparities based on social and economic marginalization, warrant public health attention. Strategic public outreach and education on IPV is needed most in community health clinics, prenatal health settings, daycares, and primary schools given the elevated risks individuals face while pregnant and with infant/toddler-aged children. The strongest predictors of increased IPV were related to housing instability, highlighting the need for policies aimed at promoting economic relief, housing support and rental assistance, and employment opportunities in order to prevent IPV.

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Appendix A**Table A1.** “Has a Partner Ever...”

	In the 3 Months Before COVID % (n/N)	Since COVID % (n/N)
Any psychological IPV	13.0% (151/1164)	11.4% (132/1162)
made decisions for you that should have been yours to make, such as what clothes you wear, things you eat, or friends you have	4.9% (57/1166)	6.5% (76/1166)
threatened to harm or take away your children	2.3% (27/1167)	.8% (9/1167)
threatened to hurt themselves or commit suicide when they were upset with you	2.7% (31/1169)	1.8% (21/1169)
tried to keep you from talking to family or friends	4.6% (54/1168)	2.6% (30/1168)
spied on you, left threatening notes or messages, destroyed your property, or called you when you did not want them to	4.1% (48/1167)	3.6% (42/1167)
told you you were a loser, failure, or not good enough	6.2% (72/1167)	5.0% (58/1167)
been violently and constantly jealous of you? (For instance, saying “If I can’t have you, no one can.”)	3.7% (43/1166)	2.3% (27/1166)
Any technology-facilitated IPV	8.8% (103/1164)	7.6% (89/1165)
used technology and/or social media to harass, impersonate, intimidate, or threaten you	3.5% (41/1166)	4.2% (49/1166)
limited your access to technology (e.g., access to devices; access to Internet; access to online accounts)	3.8% (45/1169)	2.1% (24/1169)
used mobile technology and/or GPS to track your location without your permission	3.1% (36/1168)	2.1% (24/1168)
shared private or embarrassing photos and/or videos of you without your permission	2.9% (34/1169)	.9% (11/1169)

(continued)

Table A1. (continued)

	In the 3 Months Before COVID % (n/N)	Since COVID % (n/N)
sent so many online messages or texts asking about your location or activities that you felt uncomfortable	4.1% (48/1168)	3.1% (36/1168)
Any physical IPV	6.8% (79/1163)	5.9% (68/1162)
slapped, pushed, or shoved you	3.3% (39/1166)	4.4% (52/1166)
punched you, kicked you, or hit you with something hard	3.2% (37/1165)	1.4% (16/1165)
choked, strangled, or tried to suffocate you	2.0% (23/1166)	1.8% (21/1166)
threatened to use a weapon on you	1.8% (21/1166)	1.3% (15/1166)
used a knife or gun on you	1.1% (13/1169)	1.5% (17/1169)
Any sexual IPV	6.3% (73/1160)	5.5% (64/1160)
physically forced you to have sexual intercourse or do something sexual when you did not want to	1.9% (22/1165)	2.6% (30/1165)
pressured you into sexual activity by doing things like threatening to end your relationship, threatening to spread rumors about you, or wearing you down by repeatedly asking for sex or showing that they were unhappy	4.4% (52/1166)	3.3% (38/1116)
tried to get you pregnant when you did not want to get pregnant	.7% (8/1165)	.9% (10/1165)

Table A2. Comparison of Experience of IPV in the Three Months Immediately Prior to COVID Versus Since COVID, as Assessed With Behavioral IPV Screener.

	None Before, None Since % (n/N)	None Before, but Experienced Since % (n/N)	Experienced Before, but None Since % (n/N)	Experienced Before and Experienced Since % (n/N)
Psychological IPV	84.3% (979/1162)	2.9% (34/1162)	4.4% (51/1162)	8.4% (98/1162)
Technology-facilitated IPV	89.3% (1040/1164)	1.8% (21/1164)	3.1% (36/1164)	5.8% (67/1164)
Physical IPV	91.7% (1066/1162)	1.5% (18/1162)	2.4% (28/1162)	4.3% (50/1162)
Severe physical IPV	93.3% (1085/1163)	1.5% (17/1163)	2.5% (29/1163)	2.8% (32/1163)
Sexual IPV	91.9% (1066/1160)	1.8% (21/1160)	2.6% (30/1160)	3.7% (43/1160)
Any IPV	80.7% (924/1145)	3.3% (38/1145)	4.3% (49/1145)	11.7% (132/1145)

Table A3. IPV Incidence Rate Immediately Before COVID Among Those With No Lifetime Remote History of IPV.

	No IPV in the 3 Months Before COVID	Any IPV in the 3 Months Before COVID
No lifetime remote history of IPV	661 (57.7%)	26 (2.3%)
Any lifetime remote history of IPV	301 (26.3%)	158 (13.8%)

IPV incidence rate in the 3 months before COVID: 26/687 = 3.8%.

Table A4. IPV Incidence Rate During the First Three Months of COVID Among Those With No Recent History of IPV.

	No IPV During COVID	Any IPV During COVID
No IPV in the 3 months before COVID	924 (80.7%)	38 (3.3%)
Any IPV in the 3 months before COVID	49 (4.3%)	132 (11.7%)

IPV incidence rate during COVID among those with no recent IPV before COVID: 38/962 = 4.0%.

Author Biographies

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Rich Tolman is the Sheldon D. Rose Collegiate Professor of Social Work at the University of Michigan School of Social Work. Dr Tolman's work focuses on the effectiveness of interventions designed to change violent and abusive behavior, and the impact of violence on the physical, psychological, and economic well-being of victims.